

Notice of Allowability

Application No.

10/811,138

Examiner

Rosanne Kosson

Applicant(s)

DAUNERT ET AL.

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to an amendment filed on July 26, 2007.
2. ☒ The allowed claim(s) is/are 12 and 13.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

1. The application has been amended as follows.

The claims are amended as follows:

1-11. (canceled)

12. (currently amended) An isolated nucleic acid having at least 95% sequence identity to SEQ ID NO: 3 wherein said nucleic acid encodes a protein ~~encodes a protein~~ that binds coelenterazine and molecular oxygen and emits light, said protein having a tryptophan residue in a first position corresponding to position 82 of SEQ ID NO: 4.

13. (currently amended) An isolated nucleic acid having at least 95% sequence identity to SEQ ID NO: 3 wherein said nucleic acid encodes a protein ~~encodes a protein~~ that binds coelenterazine and molecular oxygen and emits light, said protein having a phenylalanine residue in a first position corresponding to position 82 of SEQ ID NO: 4.

14-53. (canceled)

Authorization for this Examiner's Amendment was given by telephone by Applicants' agent, Mr. Cameron Weiffenbach, on August 2, 2007.

2. The following is an examiner's statement of reasons for allowance. The prior art neither teaches nor suggests the polynucleotide of SEQ ID NO: 3 in which the codon corresponding to amino acid position no. 82 in the encoded protein has been mutated so that W or F is present at that position. As previously discussed, the closest prior art is Bryan (US 5,876,995), which discloses a polynucleotide that encodes an aequorin that binds coelenterazine and oxygen and emits light (see SEQ ID NO: 7, cols. 113-116; cols. 19-23, Aequorin and related proteins). This

Art Unit: 1652

polynucleotide differs from SEQ ID NO: 3 by three nucleotides (see Result 1 from a search in the issued patents protein database, an alignment of Applicants' SEQ ID NO: 4 with SEQ ID NO: 7 of Bryan). The codon for S at amino acid positions 145 and 152 (AGC) is TCG in Bryan's sequence. The codon for amino acid position 82 (TGG, TTT or TTC) is TAT in Bryan's sequence, which encodes Y.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosanne Kosson whose telephone number is 571-272-2923. The examiner can normally be reached on Monday-Friday, 8:30-6:00, alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/811,138

Page 4

Art Unit: 1652

Rosanne Kosson
Examiner, Art Unit 1652

rk/2007-08-01

Rosanne Kosson

Rebecca E. Debuty
REBECCA E. DEBUTY
PRIMARY EXAMINER
GROUP 1652
/bdr